

**Notice of Allowability**

Application No.

10/501,536

Examiner

Hieu Phan

Applicant(s)

TENERZ ET AL.

Art Unit

3738

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 02/24/2005.
2. ☒ The allowed claim(s) is/are 1-25 and 27-40.
3. ☒ The drawings filed on 16 July 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 07/16/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Glenn Law on 05/31/2005.

The application has been amended as follows:

Please see attachments.

### ***Conclusion***

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hieu Phan whose telephone number is 571-272-4757. The examiner can normally be reached on Monday-Friday from 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine M McDermott can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3738

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hieu Phan  
Examiner  
Art Unit 3738



CORRINE McDERMOTT  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

Title  
Stent

Biodegradable stent

Field of the invention

- 5 The present invention relates to an expandable stent according to the preamble of the independent claim.

The present invention relates generally to the field of expandable stents for insertion into vessels in the body, and particularly to dissolvable stents being  
10 made of a metal that dissolves by corrosion inside the body vessel and to disintegrating stents being made of two metals with different electrochemical potentials, thereby forming a galvanic element in which an electrochemical reaction occurs that consumes the metal having the lower electrochemical potential.

15

Background of the invention

A number of different stents have been proposed for the stenting of a blood vessel that has been occluded. A widely used type of stent consists of an expandable metal mesh. This type of stent may be further divided into self-  
20 expanding stents and non-self-expanding stents.

The self-expanding stents can be made of a mesh material that changes to a larger-size configuration upon heating to body temperature. Examples of stents of this type may be found in US-6,071,308. Other self-expanding mesh stents are made of a resilient material, which can be flexed down into a small diameter  
25 tube and held in place in this configuration until it is released, at which time the mesh expands to the larger configuration.

The non-self-expanding stents are often expanded by use of an inflatable balloon, which is placed inside the mesh being in the small diameter configuration and which is then inflated, thereby expanding the mesh to the  
30 large diameter configuration. The balloon itself is then deflated for removal, while the metal mesh is left in the expanded configuration. For examples of non-self-expanding stents, see US-5,799,384 and the international application WO-0189417.

Relate Field

05/12/2005  
WO 03/063733

Title~~Stent~~

## Biodegradable Stent

Field of the invention

- 5 The present invention relates to an expandable stent according to the preamble of the independent claim.

The present invention relates generally to the field of expandable stents for insertion into vessels in the body, and particularly to dissolvable stents being made of a metal that dissolves by corrosion inside the body vessel and to disintegrating stents being made of two metals with different electrochemical potentials, thereby forming a galvanic element in which an electrochemical reaction occurs that consumes the metal having the lower electrochemical potential.

15

Background of the invention

A number of different stents have been proposed for the stenting of a blood vessel that has been occluded. A widely used type of stent consists of an expandable metal mesh. This type of stent may be further divided into self-expanding stents and non-self-expanding stents.

The self-expanding stents can be made of a mesh material that changes to a larger-size configuration upon heating to body temperature. Examples of stents of this type may be found in US-6,071,308. Other self-expanding mesh stents are made of a resilient material, which can be flexed down into a small diameter tube and held in place in this configuration until it is released, at which time the mesh expands to the larger configuration.

The non-self-expanding stents are often expanded by use of an inflatable balloon, which is placed inside the mesh being in the small diameter configuration and which is then inflated, thereby expanding the mesh to the large diameter configuration. The balloon itself is then deflated for removal, while the metal mesh is left in the expanded configuration. For examples of non-self-expanding stents, see US-5,799,384 and the international application WO-0189417.

Relate Application

This application is a 371 of PCT/SE02/02365, filed December 12, 2002, which claims benefit of 60/352,581, filed on 01/31/2002.

26. (Cancelled.)

27. <sup>23</sup> (Currently amended) An expandable ~~Expandable~~ stent according to claim 26, ~~characterized in that~~ wherein:

the joining portions have a higher porosity compared to the interconnecting portions.

28. <sup>23</sup> (Currently amended) An expandable ~~Expandable~~ stent according to claim 26, ~~characterized in that~~ wherein:

joining portions have a smaller radial thickness as compared to the radial thickness of the interconnecting portions.

29. (Currently amended) An expandable ~~Expandable~~ stent (1; 3; 7) according to claim 24, ~~characterized in that~~ wherein:

said metal dissolves by corrosion after a pre-defined time inside said body passage.

30. (Currently amended) Method A method for the manufacturing of an expandable metal stent for insertion into a body passage, comprising the steps of:  
providing a tube of a first metal, the outer surface and/or the inner surface of the tube being coated with a layer of a second metal, the second metal having an electrochemical potential that differs from the electrochemical potential of the first metal; and

making an expandable metal stent from the tube, the stent having a mesh structure of interconnecting portions (6) joined together by joining portions (5), said stent, when inserted into said body passage, is adapted to dissolve into smaller parts, wherein the joining portions dissolve[[s]] faster than the interconnecting portions, the stent comprises a first metal and a second metal, the second metal having an electrochemical potential that differs from the electrochemical potential of the first metal, and wherein said method includes that the metal stent (7) is made